

WHAT IS CLAIMED IS:

1. An RF data transfer system comprising:
means for detecting and characterizing RF interference with said data transfer; and
means for adjusting the RF transmission to avoid said interference.
2. The system of claim 1 wherein said adjusting means includes:
means for shifting a sequence of RF time slots to avoid said interference.
3. The system of claim 1 wherein said adjusting means includes:
means for skipping at least one time period in a sequence of time periods to avoid said interference.
4. The system of claim 1 wherein said adjusting means includes:
means for changing modulation rate of said RF data transfer to avoid said interferences.
5. The system of claim 1 wherein said
means for detecting is an antenna separate from the antennas used to effect said RF data transfer.
6. The system of claim 1 wherein said means for characterizing includes:
means for analyzing the RF data transfer for characteristics of interference.

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7. A method of reducing RF interference for unlicensed band transmissions, said method comprising the steps of:

calculating characteristics of RF interference within a band of interest to arrive at an interference profile; and

5 adjusting desired RF transmissions to accommodate said interference profile.

8. The method of claim 7 wherein said calculating step includes the step of:
receiving on an antenna separate from the antenna used for said RF transmission at least a portion of said interference, said portion having energy characteristics different from said desired RF transmissions.

9. The method of claim 7 wherein said desired RF transmissions occur in sequential repetitive time slots and wherein said adjusting step includes the step of:
eliminating at least one of said periodic time slots for the duration of said interference.

10. The method of claim 7 wherein said desired RF transmissions occur in sequential repetitive time slots and wherein said adjusting step includes the step of:
reducing in time at least one of said periodic time slots for the duration of said interference.

11. The method set forth in claim 7 wherein said adjusting step includes the step of:
modifying a modulation scheme of said desired RF transmissions.

12. The method set forth in claim 7 wherein said adjusting step includes the step of:

changing code rate of said desired RF transmissions.

13. The method set forth in claim 7 wherein said adjusting step includes the step of:

using a different antenna for said desired RF transmissions.

14. The method set forth in claim 7 wherein said adjusting step includes the step of:

using a different hub for said desired RF transmissions.

15. The method set forth in claim 7 wherein said adjusting step includes the step of:

changing frequency of said desired RF transmissions.

16. The method set forth in claim 7 wherein said adjusting step includes the step of:

changing channel width of said desired RF transmissions.

17. The method set forth in claim 7 wherein said adjusting step includes the step of:

changing polarity of said desired RF transmissions.

18. The method set forth in claim 7 wherein said adjusting step includes the step of:

adjusting a time sequence of said desired RF transmissions to accommodate said interference profile.

18. The method set forth in claim 7 wherein said adjusting step includes the step of:
adjusting a time sequence of said desired RF transmissions to accommodate said interference profile.

19. A method for adapting desired RF transmissions to accommodate RF interference said method comprising the steps of:

monitoring an unlicensed RF band for extraneous RF signals;

breaking said extraneous RF signals into interference types;

determining characteristics of said interference, said interface being categorized in at least one of a group of categories consisting of:

narrow band frequency interference;

periodic narrow band interference;

intermittent narrow band interference;

wideband interference;

periodic wideband interference; and

intermittent wideband interference

selecting at least one of a group of categories of action to reduce interference, said group of actions consisting of:

ceasing transmissions on a channel for a time slot conforming to determinable time frames of said periodic interference;

ceasing transmissions on a channel for a time slot conforming to determinable time frames of said intermittent interference;

adapting modulation of said transmissions;

changing code rate of said transmissions;

using a different antenna for said transmissions;

using a different hub for said transmissions;

changing frequency of said transmissions;

changing a channel width of said transmissions;

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changing polarity of said transmissions;

adjusting a time sequence of said transmissions to accommodate said periodic interference; and

adjusting a time sequence of said transmissions to accommodate said intermittent interference.

20. The method of claim 19 wherein said monitoring step includes the step of:
receiving on an antenna separate from the antenna used for said RF transmissions at least a portion of said extraneous RF signals, said portion having energy characteristics different from said desired RF transmissions.